



STEREO RADIO-PHONOGRAPH SERVICE DATA

MODEL SX-150C

FILE NO. 130-075



SPECIFICATIONS

RADIO

Type: LW, MW, FM-ST radio
Freq. range: LW 150 - 380 kHz
MW 530 - 1605 kHz
FM 88 - 108 MHz
Sensitivity: Superiour high sensitive
Power output: r.m.s continuous 6 watts
at 5% distortion (total)
Power consumption: 61 W
Antennas: Ferrite core antenna (LW, MW)
Di-pole antenna (FM)
Dimensions: (W) 450 × (H) 110 × (D) 350 mm
Weight: 6.8 kg

PLAYER

Type: Belt drive, Auto-return, Auto-cut,
Arm-elevation

Motor: 4-pole synchronous motor
Speed: 33-1/3, 45 r.p.m
Turntable: 30cm solid die-cast aluminium
alloy type
Arm: Pipe arm
Cartridge: Moving magnet, VM type
Stylus: N-14D
Stylus pressure: 3.0 ± 0.5 g
Dimensions: (W) 450 × (H) 460 × (D) 180 mm
Weight: 6.5 kg

SPEAKER

Type: Pressure balance
Speaker: 16 cm, 5 cm (2 way)
Impedance: 8 ohms
Dimensions: (W) 280 × (H) 460 × (D) 180 mm
Weight: 3 kg × 2
Total weight: 19 kg

TOKYO SHIBAURA ELECTRIC CO., LTD.

2-1, GINZA 5-CHOME, CHUO-KU, TOKYO, JAPAN

1. OPERATING INSTRUCTIONS

1-1 FRONT VIEW

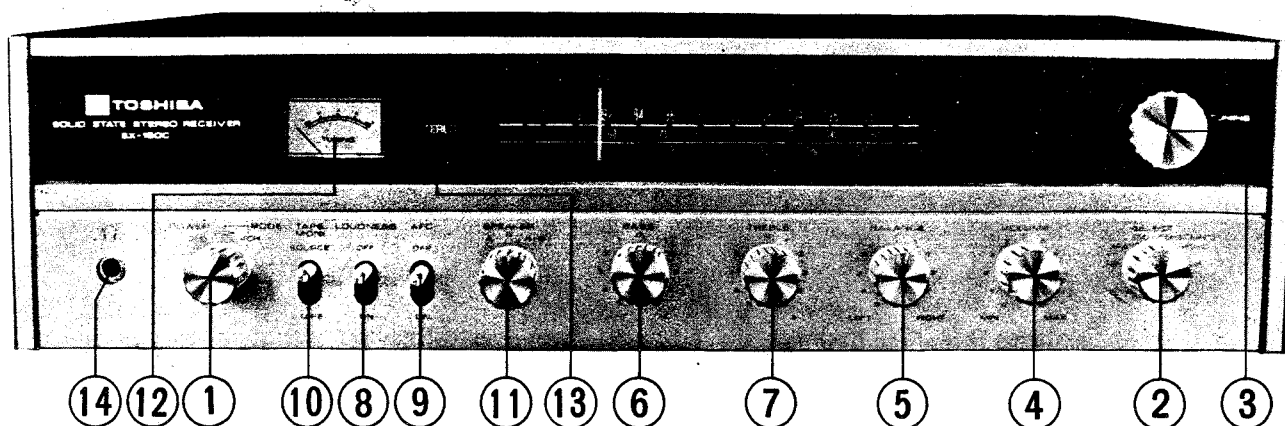


Fig. 1

- | | |
|-------------------------|------------------------------|
| 1. POWER (MODE) SWITCH | 8. LOUDNESS SWITCH |
| 2. SELECT SWITCH | 9. AFC SWITCH |
| 3. TUNING CONTROL KNOB | 10. TAPE MONITOR SWITCH |
| 4. VOLUME CONTROL KNOB | 11. SPEAKER SELECT SWITCH |
| 5. BALANCE CONTROL KNOB | 12. TUNING METER |
| 6. BASS CONTROL KNOB | 13. FM STEREO INDICATOR LAMP |
| 7. TREBLE CONTROL KNOB | 14. HEADPHONE JACK |

1-2 BACK VIEW

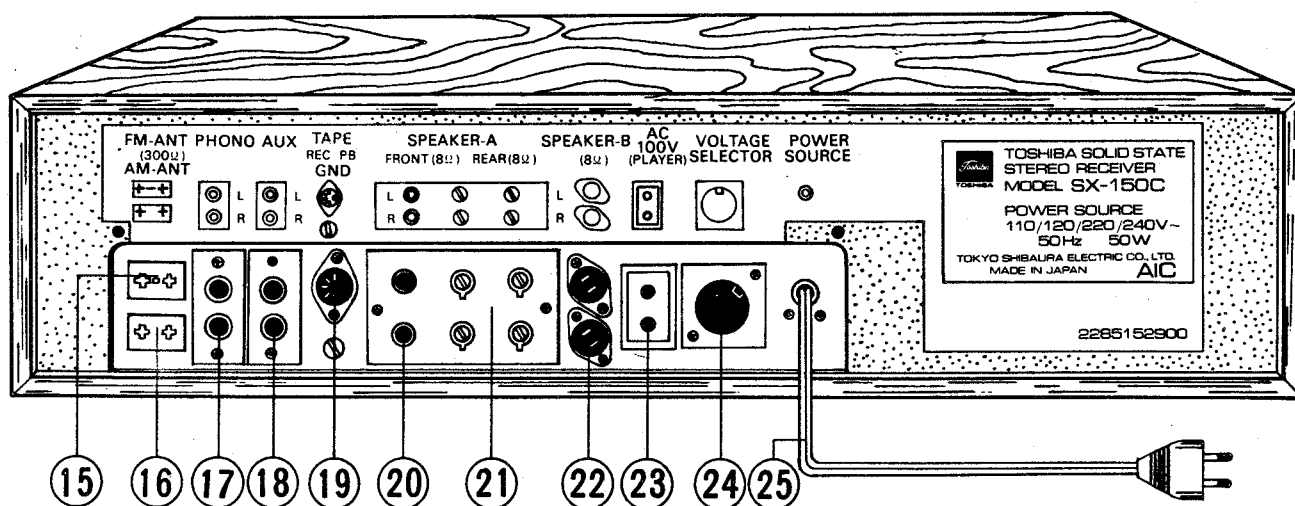


Fig. 2

- | | |
|----------------------|-------------------------------|
| 15. FM-ANT. TERMINAL | 20. SPEAKER-A (FRONT) JACK |
| 16. AM-ANT. TERMINAL | 21. SPEAKER-A (REAR) TERMINAL |
| 17. PHONO JACK | 22. SPEAKER-B JACK |
| 18. AUX JACK | 23. PLAYER OUTLET |
| 19. DIN JACK | 24. VOLTAGE SELECTOR |
| | 25. AC POWER CORD |

2. OPERATION

2-1 UNPACKING INSTRUCTION

The following three separate packings are especially provided to prevent the player trouble caused by vibration or shock in transit.

- a) Safety locking of phono motor.
- b) Special packing of the turn table (with table sheet and belt).
- c) Special packing of the head shell with cartridge, arm weight and 45 adapter.

2-2 ASSEMBLY PROCEDURE

- a) Be sure to remove two screws locking the motor as shown in figure 3.
- b) Place the turntable on the turntable shaft setting the belt as shown in figure 3 and 4.
 - (1) Set speed change lever to the speed of 33 1/3 rpm.
 - (2) Pass the drive belt to the back side of the turntable, then draw out the belt from the turntable hold.
 - (3) Place the turntable on the turntable shaft stretching the belt by your finger. At the same time, hook it over the motor pulley.
 - (4) Be sure to place the belt through the belt guide.

(CAUTION)

Be sure to do not pass the drive belt as the drive belt is twisted.

Be sure to keep off the drive belt from oil.

- c) How to assemble pickup arm
 - (1) The plug-in head should be plugged in firmly after lining the pin near the base with the groove on the the arm. Then turn the ring clockwise to lock the head shell as shown in figure 5.
 - (2) Attach the arm-weight to the rear end of the arm.

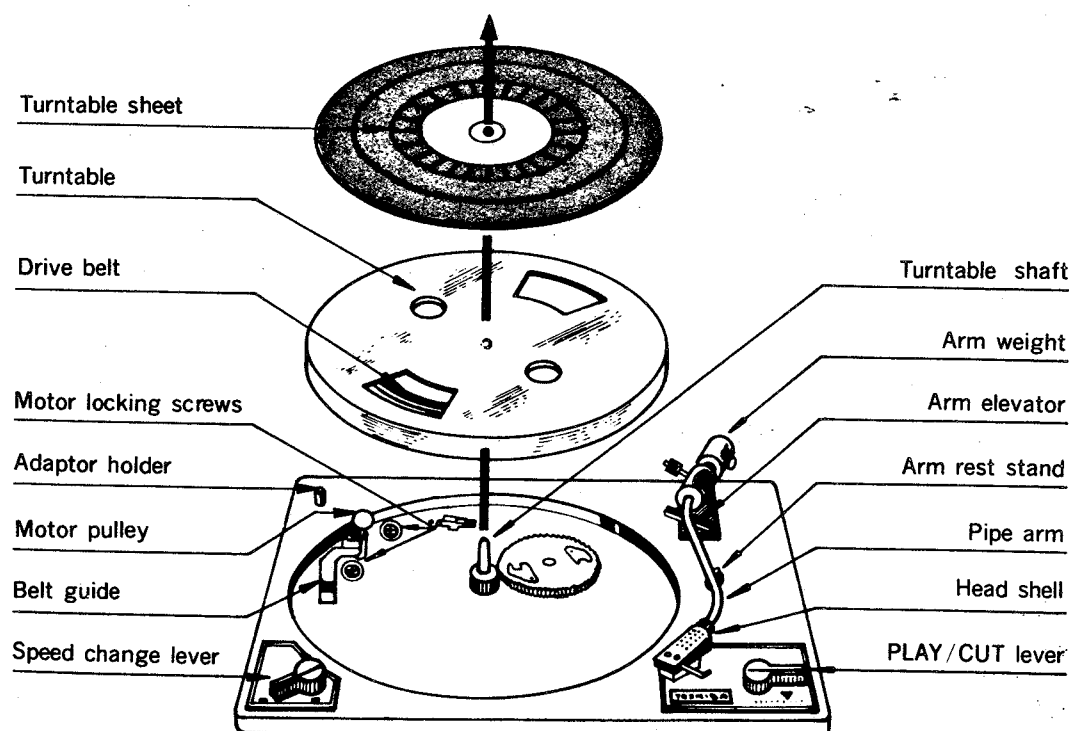
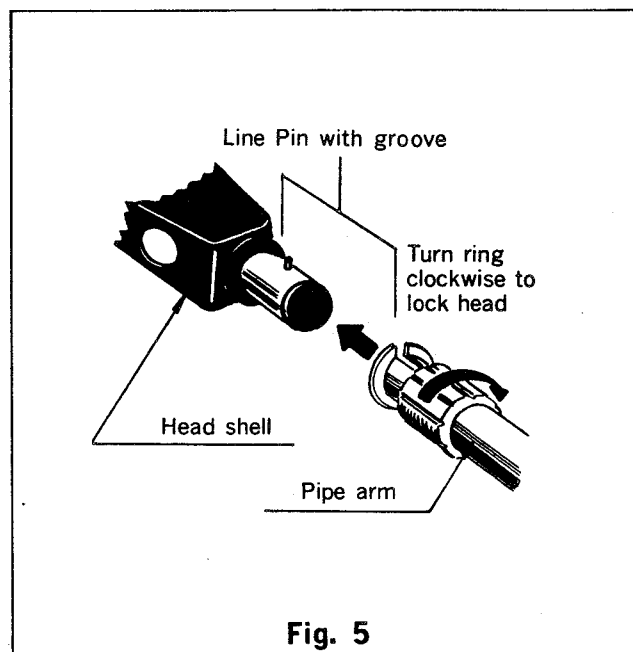
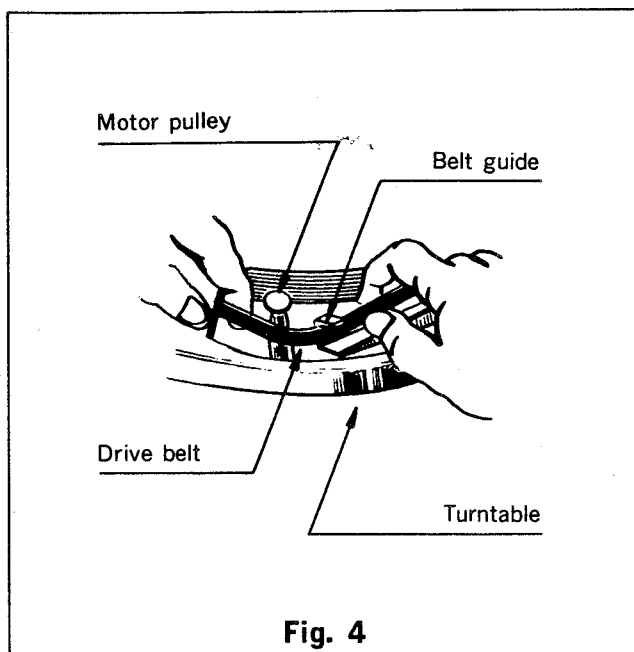


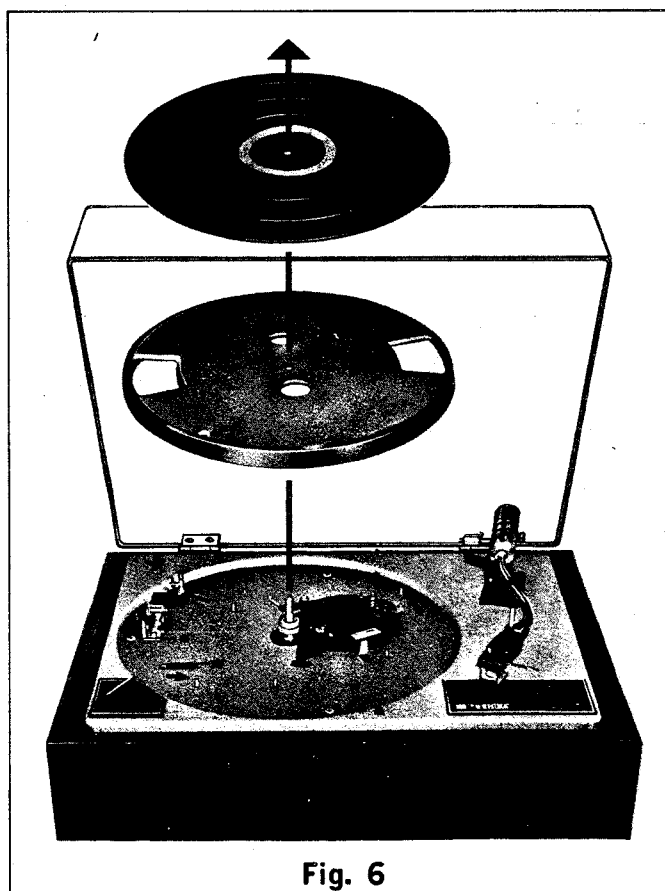
Fig. 3



3. DISASSEMBLY INSTRUCTIONS

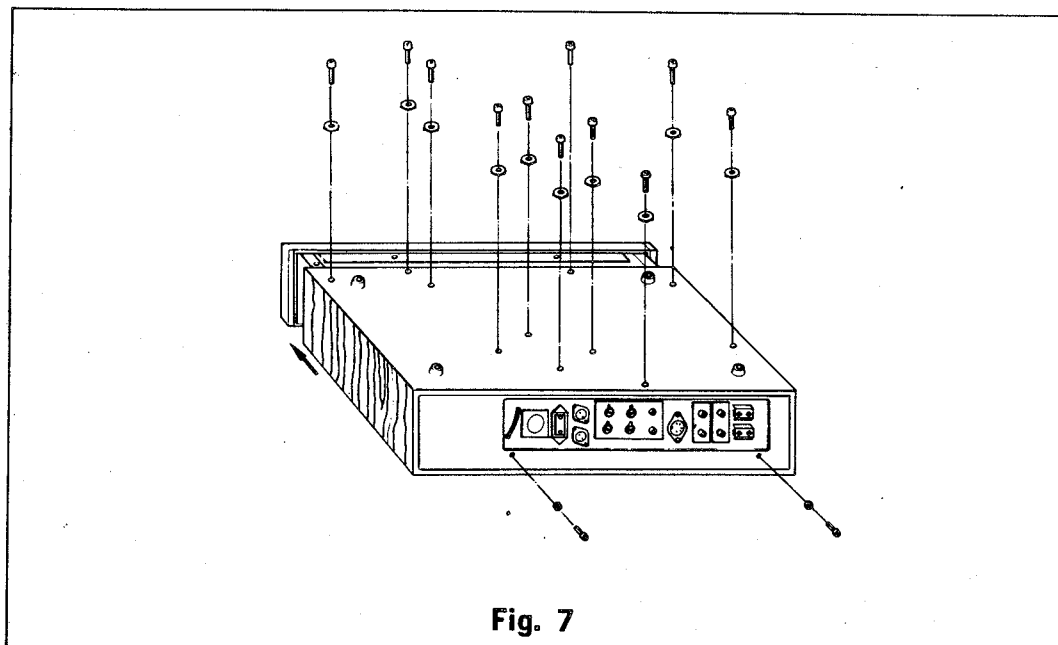
3-1 PLAYER REMOVAL

- Remove the three transit screws marked (*) from the player panel.
- Lift the turntable sheet and turntable.
- Unloose the one mounting screws marked (★) and slide them to the direction of arrow indicating as shown in figure 6.
- Lift up softly left side of player panel, slide and lift it to do direction of arrow. (to the left side)



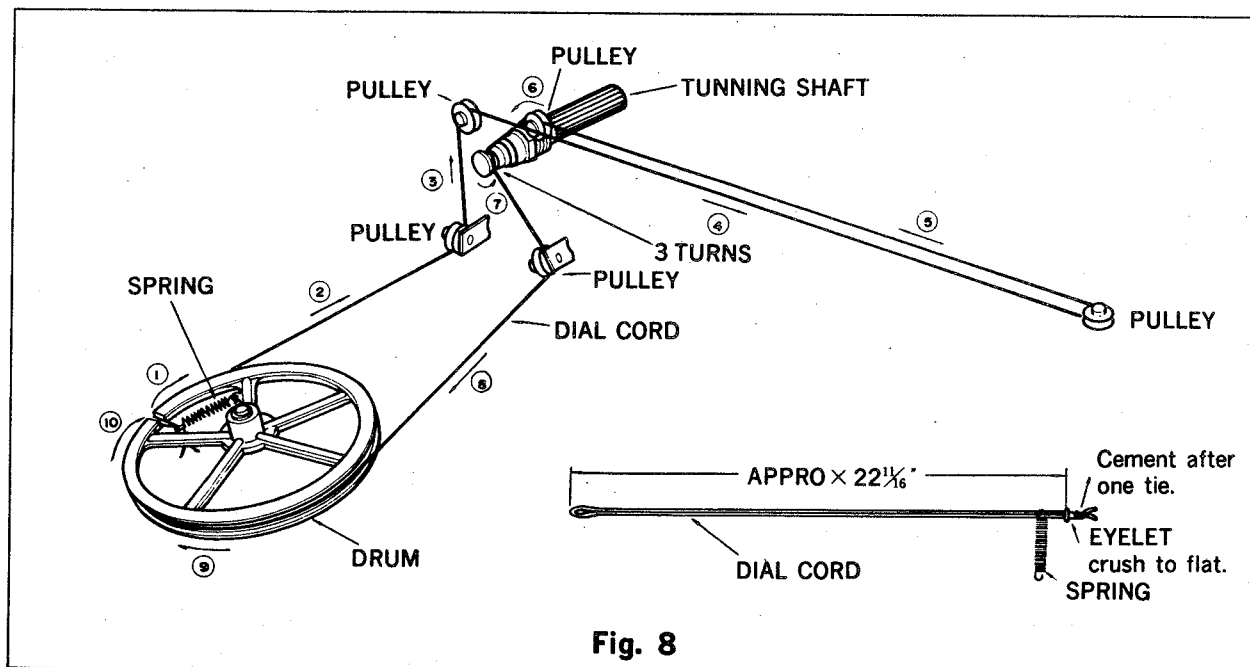
3-2 CHASSIS REMOVAL

- Remove the thirteen mounting screws from the cabinet.
- Pull out the chassis to direction of arrow as shown in below.



3-3 DIAL CORD STRINGING

- Set the tuning capacitor to the minimum capacitance. (fully clockwise)
- String the dial cord following the numbered arrow markings as shown in diagram.



3-4 STYLUS REPLACEMENT

a) LIFE OF STYLUS

The stylus can last for about 300 hours in total playing time or about 900 sides of 300 cm LP records. Since aging styli can damage discs and aggravate sounds, early replacement of styli is recommended. Playing records without wiping out dusts will very much quicken the wear of styli and also will damage disc surfaces.

So, make sure that records are wiped along grooves with record cleaners or soft, moist clothes like gauze. The turntable should also be kept clean as dusts thereon may stick to disc surfaces.

b) STYLUS REPLACEMENT

The life of the stylus is about 300 hours. A worn stylus will cause treble tones to increase harshness. Therefore, a stylus should be replaced as soon as this becomes noticeable to prevent record wear. To replace the stylus, remove the stylus holder slowly and carefully by pulling forward in the direction of cantilever.

Then insert the new stylus (See Fig. 9).

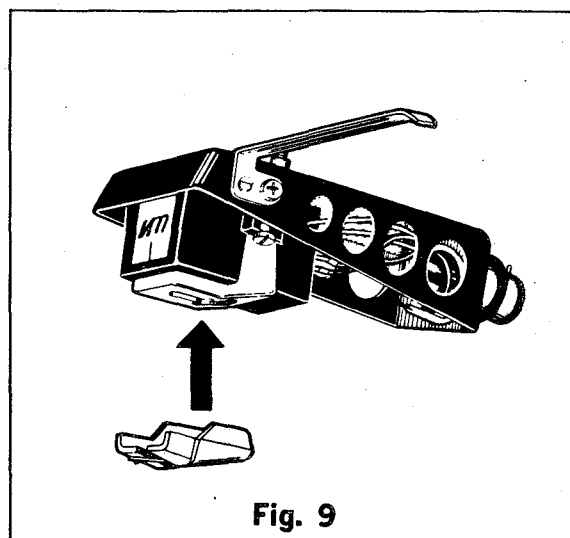


Fig. 9

C. LUBRICATION

Make lubrication into the lubrication hole shown in Figure 10 after removing the turntable. The oil is packed in the accessory box. Lubrication once every six months is sufficient for players used in the home. Once every two months is recommended for players used commercially.

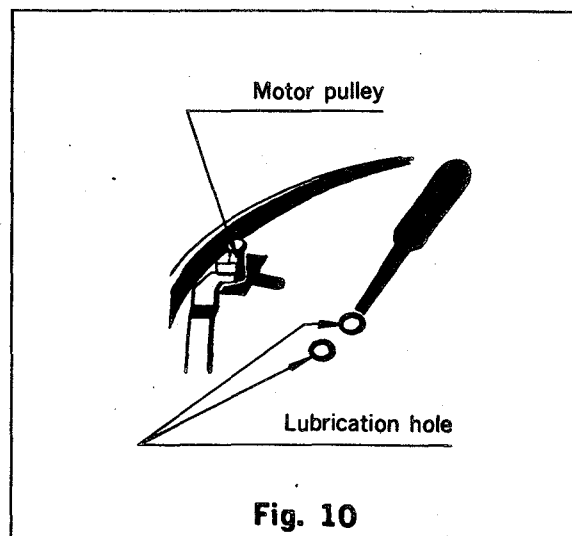


Fig. 10

4. ALIGNMENT INSTRUCTIONS

THE FOLLOWING EQUIPMENT IS REQUIRED FOR ALIGNMENT

1. Sweep signal generator (Sweep range of at least 300 kHz, center frequency of 10.7 MHz.)
2. Signal generator with a frequency range of at least from 100 kHz to 25 MHz for LW and MW, from 85 MHz to 110 MHz and 10.7 MHz for FM.
3. Oscilloscope with a wide range amplifier of approximately 100 kHz.
4. Test loop, a coil of any size wire, one turn or more.
5. VTVM (Vacuum tube voltmeter.)
6. For alignment points, see schematic diagram.

NOTES

1. During alignment keep the signal generator output at the lowest level where useable output from the set can be maintained.
2. Ground connection of signal generator ... to chassis ground.
3. Generator modulation ... 30 % 400 Hz.

4—1 MW ALIGNMENT

1. Set SELECT switch to MW.
2. Set signal generator frequency as listed in TABLE 1 MW ALIGNMENT CHART.
3. Proceed as outlined in the TABLE 1 MW ALIGNMENT CHART.

TABLE 1 MW ALIGNMENT CHART (See figure 11)

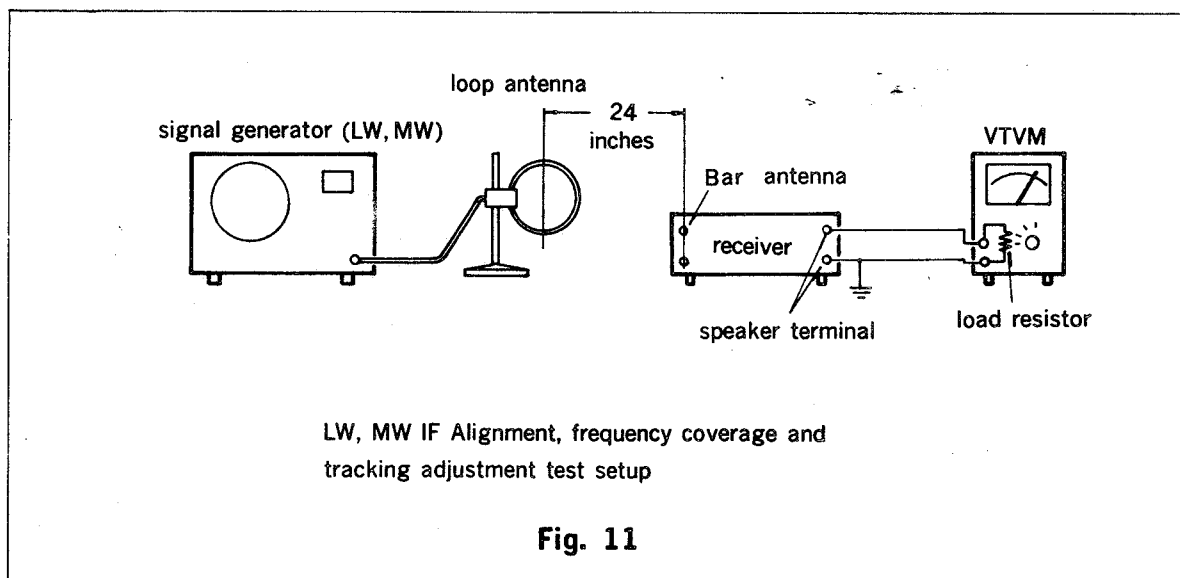
Step	Adjusting circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM
		Input	Output				
1	IF	Connect Signal generator to test loop	Connect VTVM to SP terminal	455 kHz	Low end of dial Scale at position of no unrequired signal	IT-205 IT-206 IT-207	Maximum
2	OSC (Frequency Coverage)	Connect Signal generator to test loop	Connect VTVM to SP terminal	505 kHz	Low end of dial scale	L-106	Maximum
3				1650 kHz	High end of dial scale	TC2-a	
Repeat Step 2 and 3							
4	ANT (Tracking)	Connect Signal generator to test loop	Connect VTVM to SP terminal	600 kHz	Tune to 600 kHz signal	L-108	Maximum
5				1400 kHz	Tune to 1400 kHz signal	TC1-c	Maximum
Repeat Step 4 and 5							

4-2 LW ALIGNMENT

1. Set SELECT switch to LW.
2. Set signal generator frequency as listed in TABLE 2 LW ALIGNMENT CHART.
3. Proceed as outlined in the TABLE 2 LW ALIGNMENT CHART.

TABLE 2 LW ALIGNMENT CHART (See figure 11)

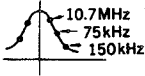
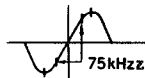
Step	Adjusting circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM
		Input	Output				
1	OSC (Frequency Coverage)	Connect Signal generator to test loop	Connect VTVM to SP terminal	135 kHz	Low end of dial scale	L-107	Maximum
2				385 kHz	High end of dial scale	TC2-b	
Repeat Step 1 and 2							
3	ANT (Tracking)	Connect Signal generator to test loop	Connect VTVM to SP terminal	170 kHz	Tune to 170 kHz signal	L-108	Maximum
4				340 kHz	Tune to 340 kHz signal	TC1-d	Maximum
Repeat Step 3 and 4							

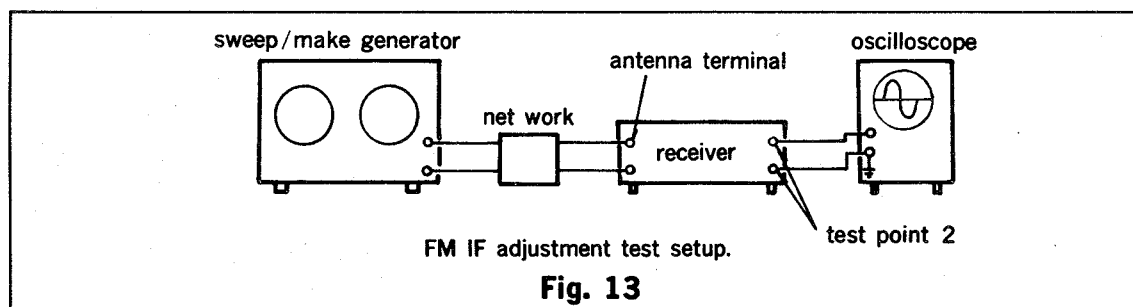
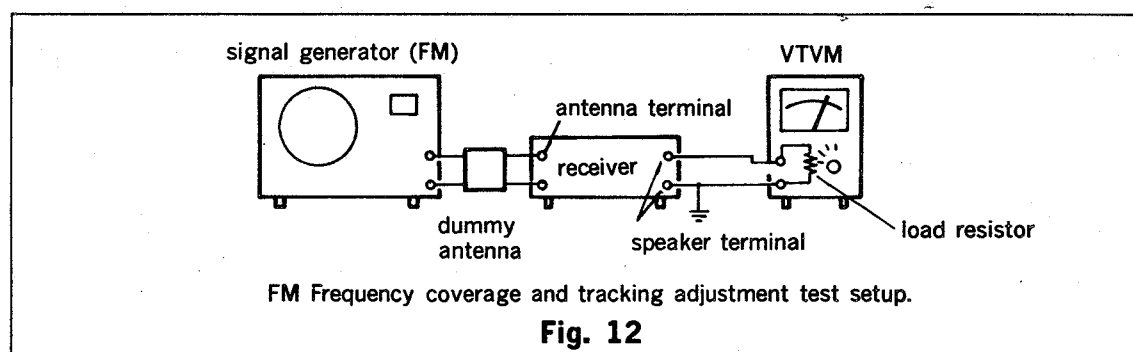


4-3 FM ALIGNMENT

1. Set SELECT switch to FM.
2. Set signal generator frequency as listed in TABLE 3 FM ALIGNMENT CHART.
3. Proceed as outlined in the TABLE 3 FM ALIGNMENT CHART.

TABLE 3 FM ALIGNMENT CHART

Step	Adjusting circuit	Connections		SG frequency	Position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to	Connect oscillo- scope to test point TP-2	10.7 MHz	Near max. capa- city of VC. at position with no unrequired signal	IT 201 IT 202 IT 203	
2	Radio Det.	FM ANT terminal	Connect oscillo- scope to test TP- 2			IT 204 (secondary)	
3	OSC	Connect to FM signal generator to	Connect VTVM to	87.5 MHz	Low end of dial scale	L105	Maximum
4	(Frequency coverage)	FM ANT terminal	SP terminal	109.5 MHz	High end)of dial scale	TC1-b	
Repeat Step 3 and 4							
5	RF	Connect FM signal generator to	Connect VTVM to	90 MHz	Tune to 90Hz signal	L102,103	Maximum
6		FM ANT terminal	SP terminal	106 MHz	Tune to 106 MHz signal	TC1-a	
Repeat Step 5 and 6							



4-4 FM STEREO ALIGNMENT

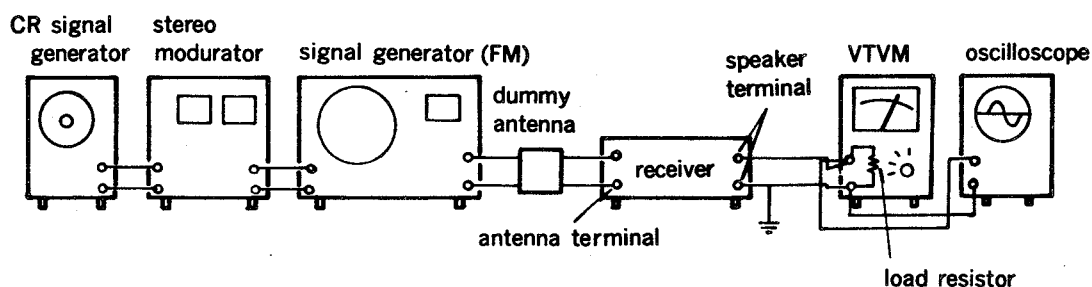
General Alignment conditions:

1. RF signal input should be enough, about 60 dB (uV) (mV).
2. Set tuning gang to quiet point on dial.
3. Set AFC switch ON, Function for FM STEREO.

Note; Set the deviation meter by the signal of L=R and switch mode desired.

TABLE 4 FM STEREO ALIGNMENT CHART

Step	Adjusting circuit	Connections		Position of tuning dial	Adjustment	VTVM
		Input	Output			
1	Dabuler 8 19 KHz pilot signal	Connect FM stereo SG. to FM ANT terminal. 19 kHz signal ON. Sub channel signal ON. add 100Hz signal from left CH.	Connect VTVM to right SP terminal	98 MHz	MXT 201 MXT 202 SVR1	Maximum
2	FM stereo signal separation	Connect FM stereo SG. to FM ANT terminal. 19 kHz signal ON. Main channel. sub channel signal ON. add 1000 Hz signal from left CH.	Connect VTVM to right SP terminal		MXT 201 MXT 202 SVR1	Maximum
3		Connect FM stereo SG. to FM ANT terminal. 19 kHz signal ON. Main channel. subchannel signal ON. add 1000Hz signal from right CH.	Connect VTVM to right SP terminal		MXT 201 MXT 202 SVR1	Maximum
Repeat Step 2 and 3						



FM MPX Adjustment test setup.

Fig. 14

5. PRINTING CIRCUIT BOARD DIAGRAM

5-1 RADIO CIRCUIT BOARD

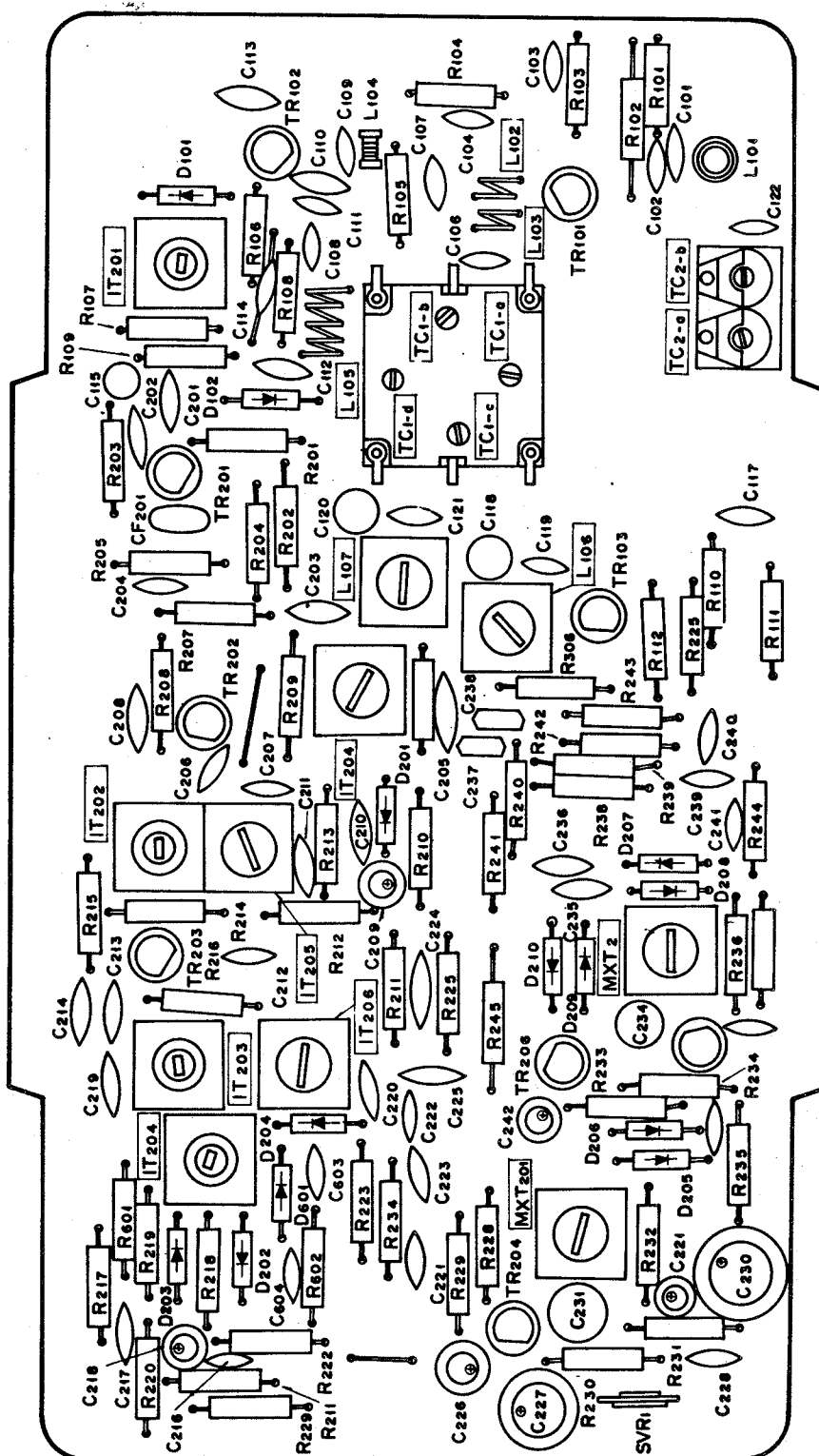


Fig. 15 TOP VIEW





5-3 EQ AMP CIRCUIT BOARD

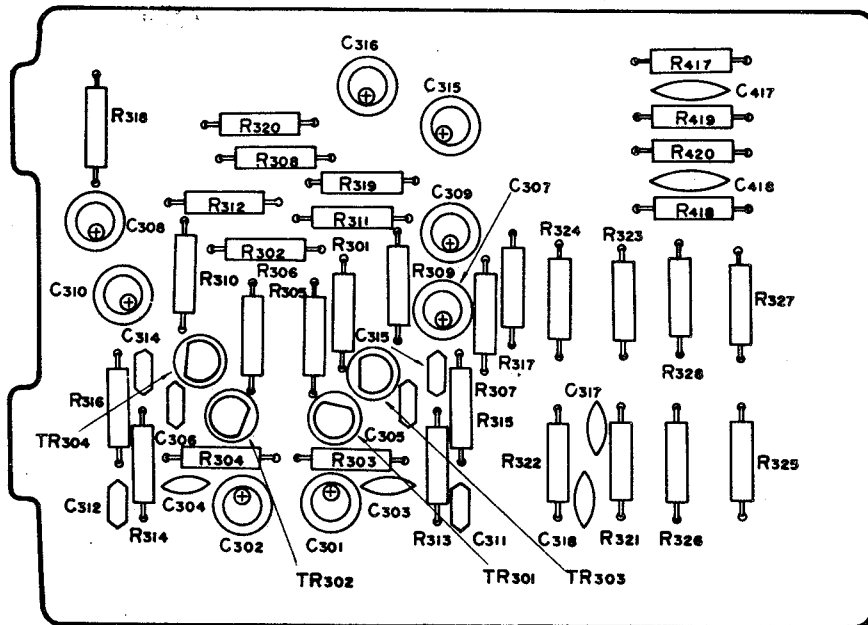


Fig. 19 TOP VIEW

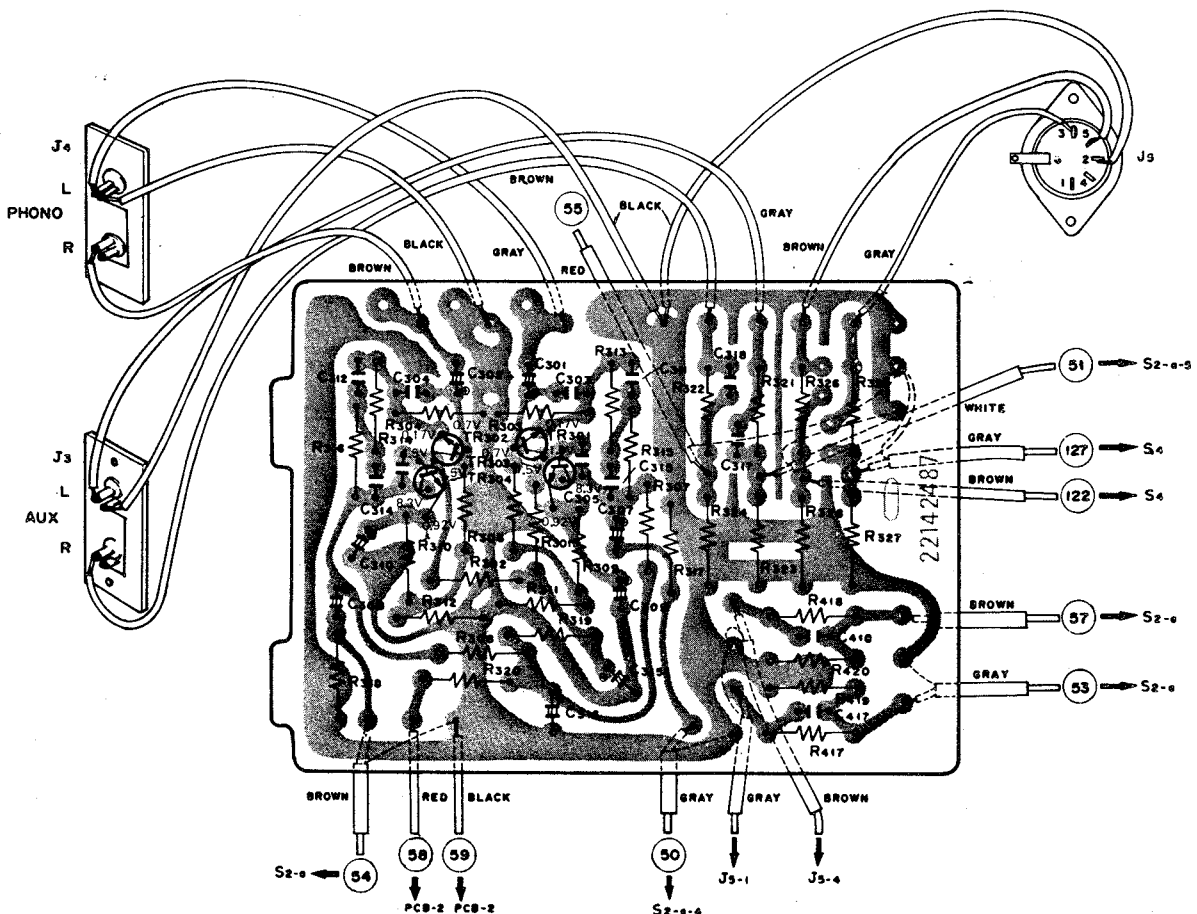


Fig. 20 BOTTOM VIEW (PCB-3)

5-4 POWER SUPPLY CIRCUIT BOARD

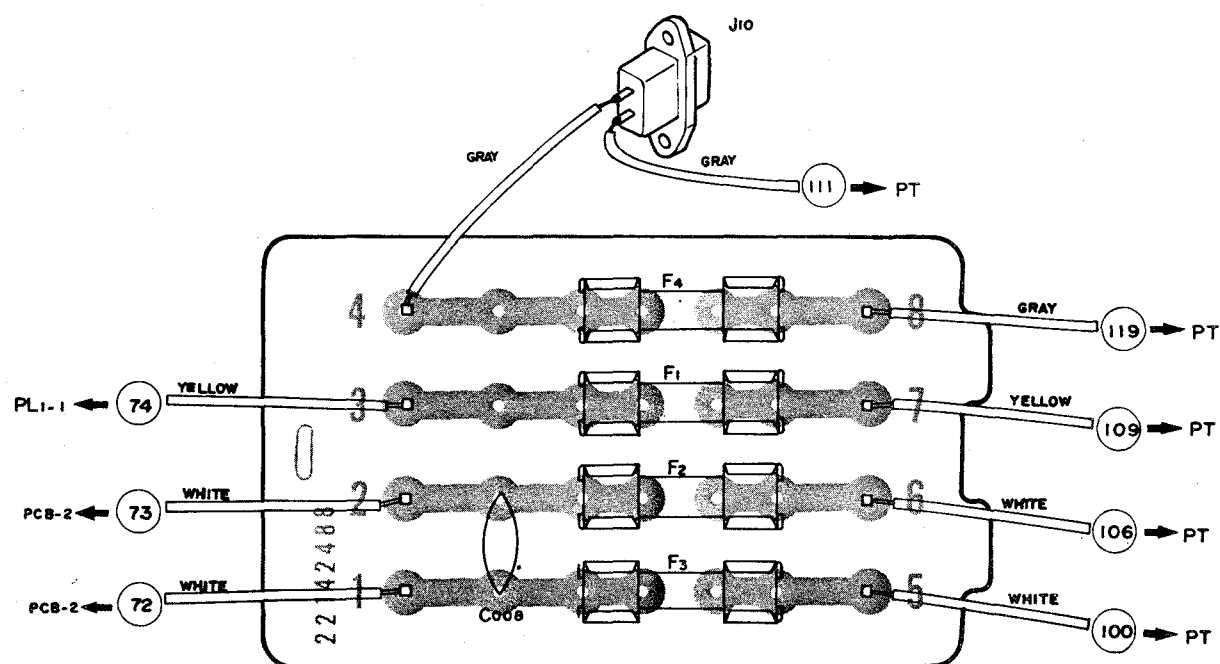
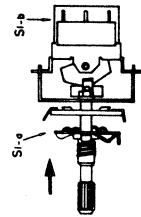


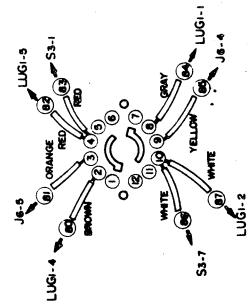
Fig. 21 TOP AND BOTTOM VIEW (PCB-4)

6. SEVERAL PARTS CONNECTION

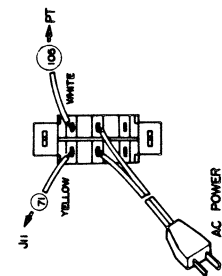
POWER (MODE) SWITCH S1



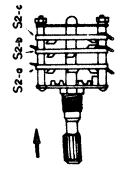
S1-a



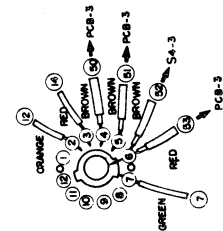
S1-b



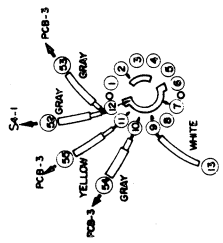
SELECTOR SWITCH S2



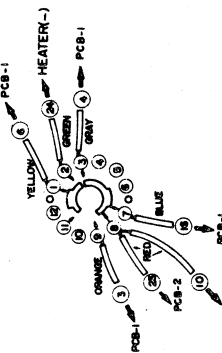
S2-a (Front)



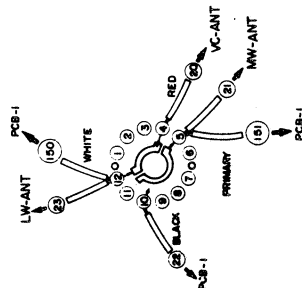
S2-a-(Rear)



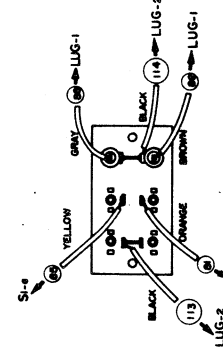
S2-b (Front)



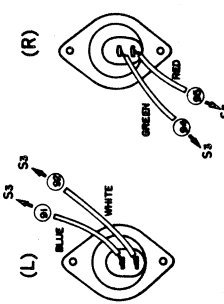
S2-b (Rear)



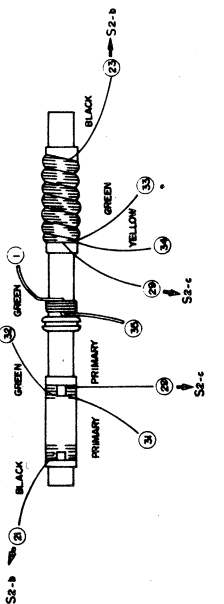
SPEAKER A JACK J6



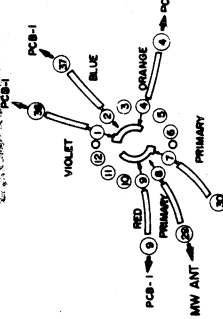
SPEAKER B JACK J7, J8



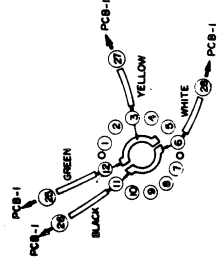
LW, MW ANT COIL L108



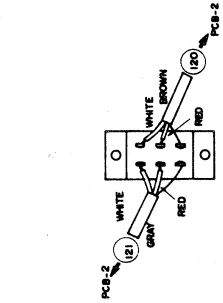
S2-c (Front)



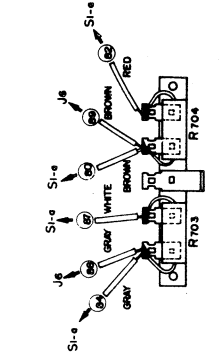
S2-c (Rear)



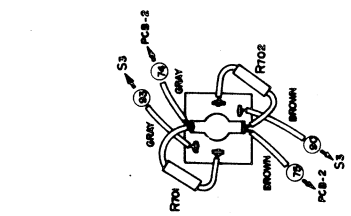
LOUDNESS SWITCH S5



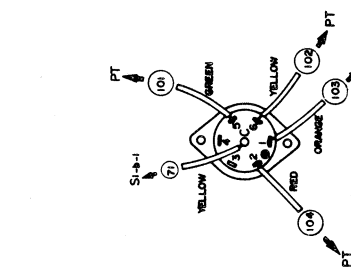
LUG 1



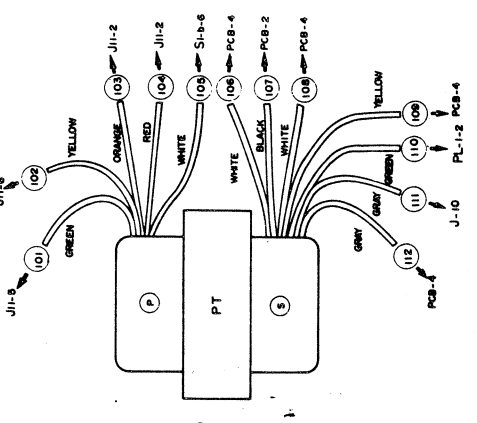
HEADPHONE JACK J9



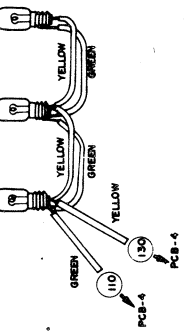
VOLTAGE SELECT J11



POWER TRANS



DIAL LIGHT LAMP PL2, 3, 4



The diagram illustrates a complex electronic circuit for a radio receiver. It features a series of transistors (TR101 through TR508) and various passive components like capacitors (C101 through C512) and resistors (R101 through R508). The circuit is divided into several functional blocks, including a tuner section, a detector section, and an amplifier section. A parts list at the bottom identifies the components and their values. A note at the bottom right states: "NOTE 1) ALL RESISTANCE VALUES ARE IN OHMS ALL CAPACITANCE VALUES ARE IN MICROFARAD K=1,000 M=1,000,000 P=1,000,000".

Parts List:

TR101	2SK19	FM RF
TR102	2SC785	FM CONV.
TR103	2SC380	AM CONV.
TR201	2SC380	FM IF
TR202	2SC380	FM AM IF
TR203	2SC380	FM AM IF
TR204	2SC373	FM MPX.
TR205	2SC373	FM MPX.
TR206	2SC373	FM SWITCH
TR301, 302	2SC732	EQ AMP.
TR303, 303	2SC732	TONE AMP.
TR401, 402	2SC732	AF AMP.
TR501, 502	2SC733	DRIVER AF
TR503, 504	2SA684	POWER AMP.
TR505, 506	2SC1398	
TR507, 508	2SA748	
D001-004	1S1885	RECT.
D101	1S1555	FM LIMITER
D102	1S2688	AFC
D201	1S1555	AGC
D202	2-0A90	FM DETEC.
D203	2-0A90	AM DETEC.
D204	2-0A90	DOB.
D205	2-0A90	MPX SWITCH
D206	2-0A90	
D207	2-0A90	
D208	2-0A90	
D209	2-0A90	
D210	2-0A90	
D501	KB-165	BIAS
D502	2-0A90	AM TUNING

Note: 1) ALL RESISTANCE VALUES ARE IN OHMS
ALL CAPACITANCE VALUES ARE IN MICROFARAD
K=1,000 M=1,000,000 P=1,000,000

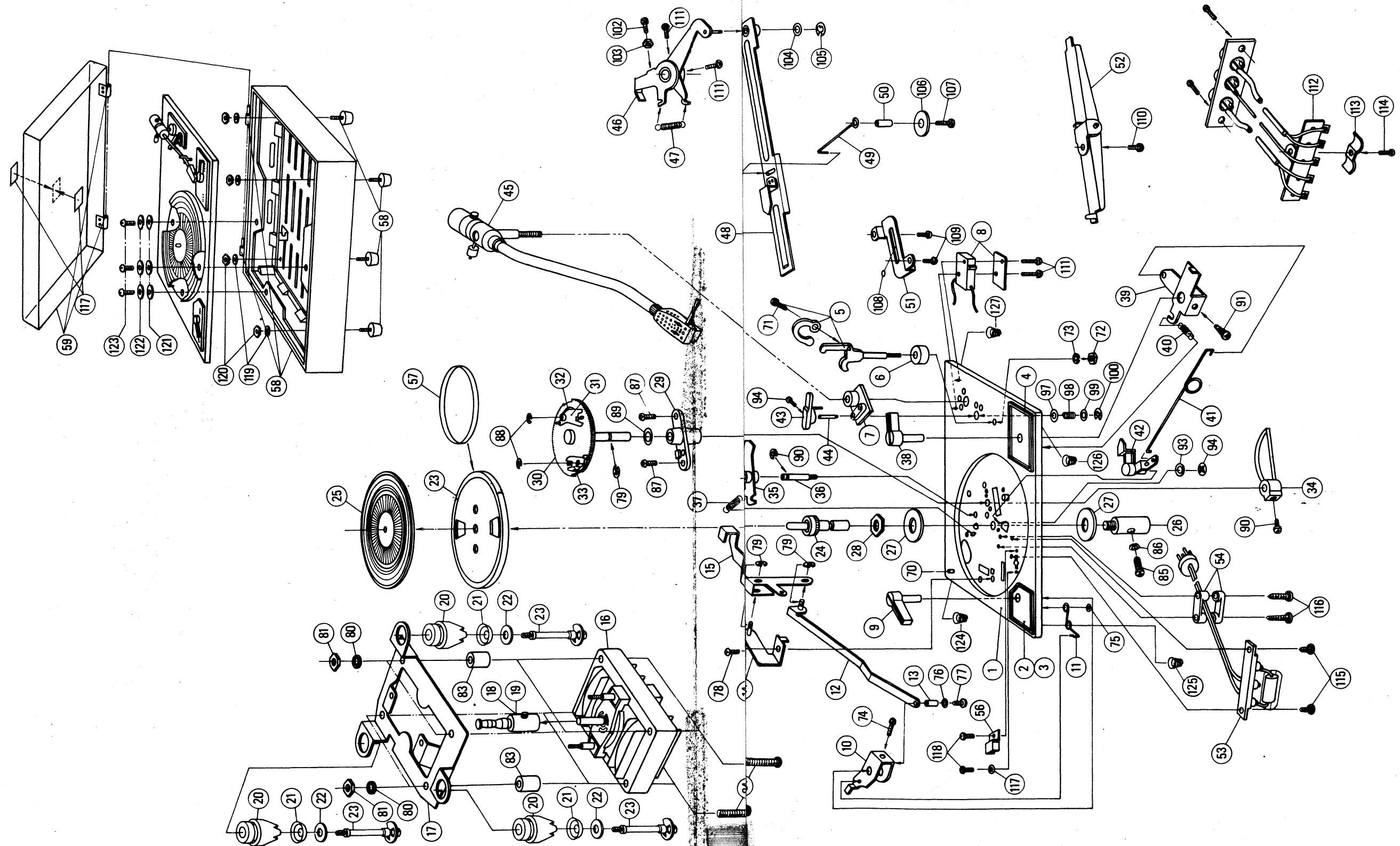
- 19 -

SX-150C



SX-150C

8. EXPLODED VIEW—PLAYER



9. PARTS LIST

Key No.	Part No.	Description
UNITS		
	22131203	Front End Unit
	22136414	Audio Unit
	22138204	Sply Unit
	22136415	Equalizer Unit
TRANSISTORS AND DIODES		
TR101		Transistor 2SK19
TR102		Transistor 2SC785
TR103		Transistor 2SC380
TR201, 202		Transistor 2SC380
TR203		Transistor 2SC380
TR204, 205, 206		Transistor 2SC373
TR301, 302		Transistor 2SC732
TR303, 304		Transistor 2SC733
TR401, 402		Transistor 2SC732
TR501, 502		Transistor 2SC733
TR503, 504	22114249	Transistor 2SA684
TR505, 506	22114250	Transistor 2SC1398
TR507, 508	22114251	Transistor 2SA784 748
D101		Diode 1S1555
D102	22115210	Diode 1S2688
D201		Diode 1S1555
D202, 203, 204	22115201	Diode 20A90
205, 206, 207	22115201	Diode 20A90
208, 209, 210	22115201	Diode 20A90
D501, 502	22115171	Varistor KB165
D601	22115201	Diode 20A90
COILS & TRANSFORMERS		
L101	22292053	FM-ANT. Coil
L102, 103	22294192	FM-RF. Coil
L104	22291009	FM-Choke. Coil
L105	22294194	FM-Oscillator Coil
L106	22245188	MW-Oscillator Coil
L107	22205025	LW-Oscillator Coil
L108	22242424	LW-MW. ANT Coil
IT201	22265554	IF Transformer, FM
IT202	22265562	IF Transformer, FM
IT203	22267276	IF Transformer, FM
IT204	22267272	IF Transformer, FM
IT205	22264565	IF Transformer, AM

Key No.	Part No.	Description
IT206	22264566	IF Transformer, AM
IT207	22266228	IF Transformer, AM
MXT201	22212025	MPX-Coil 19 kHz
MXT202	22232141	MPX-Coil 38 kHz
PT	22213626	Power Transformer
CF201	22153018	Ceramic Filter
CAPACITORS		
(D: ± 0.5 PF K: ± 1 PF M: $\pm 20\%$ P: $\pm 100\%$ Z: $\pm 80\%$ J: $\pm 5\%$)		
C101	22361200	Ceramic 5 PF D
C102, 110	22362201	Ceramic 200 PF K
C103, 111	22343202	Ceramic 0.002 mfd M
C104, 113	22341203	Ceramic 0.02 mfd P
C105, 112	22343102	Ceramic 0.001 mfd M
C106, 122	22361250	Ceramic 25 PF J
C107, 108	22361509	Ceramic 5 PF D
C109	22361300	Ceramic 30 PF J
C114, 116	22361100	Ceramic 10 PF D
C115	22342403	Ceramic 0.04 mfd Z
C117	22341103	Ceramic 0.01 mfd P
C118	22392271	Polystyrene 270 PF J
C119	22373103	Mylar 0.01 mfd M
C120	22492403	Polystyrene 100 PF J
C121	22373472	Mylar 0.0047 mfd M
C201, 204	22342103	Ceramic 0.01 mfd P
C202, 203, 205	22341203	Ceramic 0.02 mfd P
208, 210, 211	22341203	Ceramic 0.02 mfd P
214, 215, 224	22341203	Ceramic 0.02 mfd P
C206	22361309	Ceramic 3 PF D
C207	22361109	Ceramic 1 PF D
C209	22445100	Electrolytic 10 mfd 16 WV
C212	22361209	Ceramic 2 PF D
C213	22361409	Ceramic 4 PF D
C216, 217, 219	22362301	Ceramic 300 PF K
C218	22446479	Electrolytic 4.7 mfd, 25WV
C220, 221, 223	22373103	Mylar 0.01 mfd M
C222	22373472	Mylar 0.0047 mfd M
C225	22342403	Ceramic 0.04 mfd P
C226, 242	22445100	Electrolytic 10 mfd, 16 WV
C227	22443470	Electrolytic 47 mfd, 10 WV
C228, 232, 233	22372393	Mylar 0.399 mfd K
C229	22446479	Electrolytic 4.7 mfd, 25WV
C230	22445221	Electrolytic 220 mfd, 16 WV

Key No.	Part No.	Description
C231, 234	22391472	Polystyrene 4700PF J
C235, 236, 237	22372222	Mylar 0.0022mfd K
238	22372222	Mylar 0.0022mfd K
C239, 240	22373103	Mylar 0.01 mfd M
C241	22372472	Mylar 0.0047mfd K
C301, 302	22446479	Electrolytic 4.7mfd, 25 WV
C303, 304, 317	22362201	Ceramic 200 PF K
318	22362201	Ceramic 200 PF K
C305, 306	22362500	Ceramic 50 PF K
C307, 308	22402014	Aluminum 0.1 mfd, 16 WV
C309, 310	22443470	Electrolytic 47 mfd, 10 WV
C311, 312	22372153	Mylar 0.015 mfd K
C313, 314	22372472	Mylar 0.0047 mfd K
C315, 316	22446470	Electrolytic 47 mfd, 25 WV
C401, 402	22445100	Electrolytic 10 mfd, 16 WV
C403, 404	22446479	Electrolytic 4.7 mfd, 25 WV
C405, 406	22372222	Mylar 0.0022 mfd K
C407, 408	22372223	Mylar 0.022 mfd K
C409, 410	22372682	Mylar 0.1 mfd K
C411, 412	22372104	Polystyrene 680 PF K
C413, 414	22392680	Mylar 0.015 mfd J
C415, 416	22372153	Ceramic 200 PF K
C417, 418	22362201	Ceramic 200 PF K
C419	22447471	Electrolytic 470 mfd, 35 WV
C420	22447221	Electrolytic 220 mfd, 35 WV
C501, 502	22402015	Aluminum 0.22 mfd, 25 W
C503, 504	22446101	Electrolytic 100 mfd, 25 WV
C505, 506	22373102	Mylar 0.001 mfd M
C507, 508	22362301	Ceramic 300 PF K
C509, 510	22447470	Electrolytic 47 mfd, 35 WV
C511, 512	22446471	Electrolytic 470 mfd, 35 WV
C513	22447471	Electrolytic 470 mfd, 35 WV
C514	22447101	Electrolytic 100 mfd, 35 WV
C001	22450014	Electrolytic 2200 mfd, 40 WV
C002, 003, 004	22341030	Ceramic 0.01 mfd P
005	22341030	Ceramic 0.01 mfd
C006	22445471	Electrolytic 470 mfd, 16 WV
TC2	22309036	Trimer Capacitor
RESISTORS		
(All Resistor are $\frac{1}{4}$ W, $\pm 10\%$, carbon unless otherwise noted)		
R101, 105	22561222	2.2K ohm Solid $\frac{1}{4}$ W
R102	22561105	1 M ohm Solid $\frac{1}{4}$ W

Key No.	Part No.	Description
R103, 104	22561101	100 ohm Solid
R107	22561472	4.7 K ohm Solid
R108	22561102	1 K ohm Solid
R109	22561104	100 K ohm Solid
R111	22546333	33 K ohm
R112	22546222	2.2 K ohm
R201	22546562	5.6 K ohm
R202, 220, 221	22546103	10 K ohm
R203	22546821	820 ohm
R204, 205, 206	22546102	1 K ohm
218, 219, 223	22546102	1 K ohm
R207	22546563	56 K ohm
R208, 215, 225	22546471	470 ohm
R209	22546101	100 ohm
R210	22546472	4.7 K ohm
R211	22546391	3.9 K ohm
R212	22546682	6.8 K ohm
R213, 224	22546223	22 K ohm
R214	22546220	22 ohm
R216	22546221	220 ohm
R127	22546105	1 M ohm
R222	22546823	82 K ohm
R226	22546681	680 ohm
R227, 235, 237	22546562	5.6 K ohm
R228	22546684	680 K ohm
R229, 242, 243	22546474	470 K ohm
R231, 230, 232	22546471	470 ohm
R233, 236	22546102	1 K ohm
R234	22546473	47 K ohm
R238, 239, 240	22546682	6.8 K ohm
241	22546682	6.8 K ohm
R244	22546823	82 K ohm
R245	22563331	330 ohm Solid $\frac{1}{2}$ W
R301, 302	22546823	82 K ohm
R303, 304	22546561	560 ohm
R305, 306, 313	22546154	150 K ohm
314	22546154	150 K ohm
R307, 308	22546103	10 K ohm
R309, 310	22546181	180 ohm
R311, 312	22546821	820 ohm
R315, 316	22546153	15 K ohm
R317, 318	22546333	33 K ohm
R319, 325, 326	22546273	47 K ohm

Key No.	Part No.	Description
R320	22546562	5.6 K ohm
R321, 322, 323	22546683	68 K ohm
324	22546683	68 K ohm
R327, 328	22546183	18 K ohm
R401, 402	22546335	3.3 M ohm
R403, 404	22546274	270 K ohm
R405, 406	22546103	10 K ohm
R407, 408	22546471	470 ohm
R409, 410	22546223	22 K ohm
R411, 412	22546272	2.7 K ohm
R413, 414	22546332	3.3 K ohm
R415, 416	22546682	6.8 K ohm
R417, 418	22546224	220 K ohm
R419, 420	22546154	150 K ohm
R421	22546561	560 ohm
R501, 502	22546102	1 K ohm
R503, 504	22546154	150 K ohm
R505, 506	22546224	220 K ohm
R507, 508	22546180	18 K ohm
R509, 510	22546222	2.2 K ohm
R511, 512	22546682	6.8 K ohm
R513, 514	22546569	5.6 K ohm
R515, 516	22563221	220 ohm Solid $\frac{1}{2}$ W
R517, 518	22563331	330 ohm Solid $\frac{1}{2}$ W
R519, 520	22546220	22 ohm
R521, 522, 523	22500109	1 ohm Cement 1W
524	22500109	1 ohm Cement 1W
R525	22563220	22 ohm Solid $\frac{1}{2}$ W
R526	22546103	10 K ohm
R527, 528	22546101	100 ohm
R701, 702	22563221	220 ohm Solid $\frac{1}{2}$ W
R703, 704	22500060	4 ohm Cement 5W
R705	22500062	8 ohm Cement 10W
R706	22546122	12 K ohm
R001	22563221	220 ohm Solid $\frac{1}{2}$ W
VR1, 2	22648201	Variable Resistor 100 ohm
VR3	22640201	Variable Resistor 100K ohm
VR4	22650203	Variable Resistor 100K ohm
SVR1	22658176	Semifixed Resistor 500 ohm
ELECTRICAL PARTS		
S1	22146349	Rotary, Switch, Mode select
S2	22146352	Rotary, Switch, Select

Key No.	Part No.	Description
S3	22145874	Rotary, Switch, SP select
S4, 5, 6	22146328	Lever, Switch
J1	22167200	DIN Socket, 2P, FM-ANT
J2	22167201	DIN Socket, 2P, AM-ANT
J3, 4	22163370	US2P Jack, AUX & PHONO
J5	22167192	DIN, Socket, 5P, REC/PB
J6	22162044	Terminal, CPX, Speaker A
J7, 8	22167228	DIN, Socket, 2P, Speaker B
J9	22163276	Head Phone, Jack
J10	22167425	2P, Socket
J11	22167211	Voltage Select Socket
	22164257	Voltage Select Plug
	20749672	Selector Cover
ME	22104092	Tuning Meter
	22176286	Power Cord
PL1	22113258	Pilot Lamp
PL2, 3	22113277	Pilot Lamp
PL4	22113124	Pilot Lamp
	22167193	Pilot Lamp Socket
CABINET PARTS		
	22851529	Amp Cabinet Assembly
	20847680	Player Cabinet Assembly
	20847671	Dust Cover Assembly
	22821804	Speaker Box Assembly
	20836637	Front Panel Assembly
	20863607	Foot, Amp Cabinet, Player Cabinet
	20861681	Hinge-A-L
	20861680	Hinge-A-R
	20861678	Hinge-B
	20861672	Hinge-STP
	20746783	Support-Hinge
	20042698	Tuning Shaft
	22756561	Cushion, ST Lamp
	22837710	Dial Plate
	20042699	Pointer
	20749723	Switch Mask
	22835411	Tuning Knob
	22835410	Volume Knob
	22757531	Antenna Holder
	22856639	Cushion RB, Antenna
	22742539	Drum
	20705688	Spring, Drum

Key No.	Part No.	Description
	20772008	Dial Cord 1200mm
	20881680	Cushion RB, AC Cord
	20968691	Label, Fuse 1A
	20968692	Label, Fuse 1.6A
	20746790	Holder, Bushing
	20881676	Cord, Bushing
	20956732	Label, Attention
	20956643	Label, Clamp
	22151777	Speaker, Tweeter
	22151776	Speaker, Woofer
	22166433	Speaker, Cord
	22164359	US-Pin Cord
	22166229	Earth Cord
	22124968	FM Antenna
	20971652	Adapter 45
	22952865	Owner's Manual
PLAYER PARTS		
1	20713771	Panel
2	20741721	Selector Base
4	20779709	Reject Name Plate
5	20738654	Arm Clamp Assembly
6	20738646	Rest Stand
7	20735622	PU Stand
8	22145854	Leaf Switch <i>Micro</i>
9	20741708	Knob, Speed Change
10	20753774	Lever, Speed Change
11	20707692	Toggle Spring
12	20751706	Plate Ass'y Change Belt
14	20751705	Actuating Plate Ass'y
15	20743692	Actuating Plate Belt
16	22125525	Motor
17	20743754	Motor Sheet
19	20716703	Motor Pulley
20	20803624	Motor Attachment
23	20723653	Turntable
24	20725662	Table Shaft Ass'y
25	20723027	Table Sheet
26	20725660	Table Shaft Holder
29	20773767	Holder Gear Shaft
30	20727626	Main Gear
31	20751729	Auto Clutch Ass'y
32	20751704	Auto Trip Ass'y

Key No.	Part No.	Description
33	20753782	Hand Clutch
34	20757656	Return Cam
35	20746737	Gear Stopper
36	20762824	Gear Stopper Shaft
37	20705601	Tension Coil Spring
38	20763889	Reject knob Ass'y
39	20743724	Reject Plate
41	20707691	Reject Pole
42	20751753	Reject Lever Ass'y
43	20761601	PU Lifting Bar
44	20763827	PU Lifting Shaft
45	20731687	PU Arm
46	20751711	PU Plate Ass'y
48	20751712	Auto Lever Ass'y
49	20753784	Return Lever Ass'y
50	20773695	Change Plate Spacer
51	20746754	Ball Holder
52	20751707	Seesaw Lever Ass'y
53	22161302	3P Lug Terminal
54	22184130	Cord Stopper
57	20728611	Belt
58	20847680	Player Cabinet Assembly CABINET HINGE-A-L HINGE-A-R FOOT
59	20847671	Dust Cover Assembly COVER DUST ASS HINGE-B HINGE-STP SUPPORT-HINGE
	20738654	Arm Clamp Assembly REST-PU-ASS REST-PU SHAFT-REST CLAMP-ARM
83	20077375	Spacer, Motor
124	20703806	Panel, Spring E
125	20703730	Panel, Spring B
126	20703731	Panel, Spring C
127	20703732	Panel, Spring D
128	22155450	Cartridge C-29M (without Stylus)
129	22164394	2P plug Cord